CHAPTER 9

AUDIENCE SURVEYS

As journalists and public relations practitioners, we must not only understand how to produce factual statistical data for our own use, but we must also understand the attempts of others to statistically analyze various events, programs and activities. We, as professional consumers of press, private and government surveys and statistics, must have a deeper understanding of numerical analysis than the average sailor.

Being a senior journalist and perhaps the CO's only public affairs resource, you must be able to understand the information presented in graphs, surveys and the statistical jargon that is often thrust on a command and just as often used to beat or intimidate an activity into some form of action. For example, such a case might arise if a community group gathered statistics on the increase of crime in its area because your base opened up a back gate into its community.

On close examination of these statistics with an accompanying graph showing a dramatic upswing of a line graph, you see the data starts with the gate opening. However, the gate opening also coincides with the summer vacation period. You, understanding that statistical data from a short period of time may have many variables, look at past crime statistics from previous years and see that at the beginning of every summer vacation the area suffers a similar surge of crime. This information would be very useful to a CO planning to make a public apology for the problem and expend money and talent to better police the new back gate area.

Although this is a contrived scenario, the idea should be clear. Not only are we JOs required to be producers of statistical data through surveys, we must also be intelligent consumers of the same.

PURPOSE OF SURVEYS

Learning Objective: *Identify the purpose of and the information generated by audience surveys.*

A Navy station manager, newspaper editor or a command PAO has to know what is happening now. Your finding out what is happening at any given minute in any given situation is impossible. As journalists, we know it is often difficult to tell what has happened in a simple car accident even days after the event. (Just look at how many disagreements on what happened ends up in court.). Nevertheless, your finding out useful information that is not unsubstantiated "scuttlebutt" is best accomplished by careful analysis of the facts on hand. Often, locating these facts is accomplished through survey research.

PROGRAM EFFECTIVENESS

By finding out how many people watch the nightly local news program, the broadcast station manager determines if it is being aired at the correct time. The newspaper editor must know how well read a particular section of the paper is if there are plans to reduce or enlarge a section. The PAO in the introduction to this chapter better know how creditable the recommendations are to the CO. Wrong decisions are usually based on wrong information input. Good information that will give a true picture is compiled with care and by using professional techniques.

Surveying for effectiveness is an integral part of your public affairs process or your ongoing estimate of product success. In the book *Effective Public Relations* by Scott M. Cutlip, Allen H. Center and Glen M. Broom, this process is broken down into the following steps:

- Defining the problem (research and fact finding)
- Planning and programming (decision making)
- Taking action and communicating
- Evaluating the program (research of results)

These four steps clearly show you how important information gathering is to any public affairs or media effort.

SURVEY EXPECTATIONS

Doing research (surveys) in the mass communication field is an inexact science. You can never say with 100-percent assurance that one television program is better liked than another. However, by following established procedures, you will know how well you are serving your total audience (the terms

audience, population, market, and so forth will be used interchangeablely in this chapter). Questions that then arise as to why this radio show is slotted at midnight, or why this feature is being reproduced regularly in your paper, will have a strong answer. This might not seem like such an important question to worry about, but remember, whether we are managing an NBS outlet, a base or ship newspaper or a public affairs office, credibility is paramount. Answering a query on why the news hour is set at 5 p.m. instead of 6 p.m. may then be backed up with hard data. This will prevent the rumormongers of the world from supposing the earlier time slot is to let your news team off earlier in the day.

An audience survey can provide valuable information that fits into five categories. They are as follows:

- Determining the approximate size of the "potential" or "available" audience
- Defining the viewing/listening/reading/thinking habits of the audience
- Identifying possible program/personnel/policy changes
- Identifying the demographics of your "typical" audience member
- Demonstrating the public image of your shop as a provider of information/entertainment

TYPES OF SURVEYS

Learning Objective: *Recognize the various types of audience surveys.*

It is often assumed your base or station's audience is a typical group of military people. What is that? Is this base an OUTUS duty station and, therefore, home for a larger percentage of women because they are serving their sea time? What percentage of families on your base has children? Is there a limit to family size for this type of duty station? The list can truly be endless with these types of questions, but with basic knowledge of your particular situation, you will get a feel of what questions are pertinent for your area and which ones are not. The important thing is to **know your audience.** This section offers ways of gathering audience data that are often overlooked as well as more traditional collection techniques.

INFORMAL SURVEYS

Surveying for every piece of information is costly, time consuming and often unnecessary. It is unnecessary because the data may already be compiled for you. As an example, the question of how many children are there on your base and what are their ages is a legitimate question for a number of reasons. Suppose you want to invest the time to produce a children's show for Saturday mornings, or say you would like to know the possible crowd size for a children's event you are planning for the weekend of the military child. Your knowing how many likely participants or viewers is a must. This type of information is already available to you if you are dealing with military or DoD personnel.

Public opinion researchers call this information "aggregate data," and it is defined as information already onhand about the individuals within the audience with which we are concerned. The alpha listing at your local administration section can be made available to you and will list all of the military members of your command along with their social security numbers and addresses. Depending on the relationship with your command data processing and administration offices, you might be able to further break the data on the individuals into various categories that are of interest to you, such as married, single, number of dependents, living location, rank, and soon. All of this type of data is "raw," meaning you are simply finding out basic demographics about the population with which you are dealing. General demographics of ships and military installations are easy to obtain. **Demographics of foreign populations are questions you must clear with your chain of command before attempting to discern.** Realize, there are special concerns for the military person trying to do research on foreign populations.

Content Analysis

Content analysis has been defined as a technique for making inferences (educated guesses) by systematically and objectively identifying specified characteristics of messages. Press clippings and broadcast monitor reports, all available from commercial services, have long been used as the basis for content analysis within the journalist paradigm. Remember, content analysis only provides data on what is being said or printed. It does not provide any indication of what your audience is actually viewing, reading or thinking.

Content analysis has often been criticized as nothing more than research into what editors and publishers think. Jimmy Carter's election win in 1976 is a good

example. Only 12 percent of the nation's dailies endorsed him. Clearly, what is on the editorial page does not represent public opinion.

However, content analysis often shows trends in the media's agenda setting function. Most press researchers agree that mass media is not effective at changing opinions on any given topic, but deciding what will be discussed on a national scale (agenda setting) is most often accomplished by media coverage of a topic. Knowing what topic is coming to the forefront of media attention would be valuable information to public affairs practitioners, especially if such a topic were to be military drug use or shipboard safety. A good public affairs office can then be proactive and check into local procedures or problems and bring together a contingency plan or perhaps even point out trouble areas to those concerned.

Mail Analysis

In relation to mass media, content analysis is mail analysis. This form of research is economical and often overlooked. It is not to be used as hard scientific data, such as the formal surveys you will soon read how to do, but it may serve as early warnings on sources of ill will or problem relationships. For most military print, broadcast and public affairs activities, reading every letter received from the public is usually not a tough assignment, and it is strongly suggested that each letter be answered. Few stations or offices have ever been inundated with bags of mail that would require random selections of letters to be read. This type of data collection is mentioned here to make you aware that letters can be more than just communication between a listener and a disc jockey. They may be the tip of a controversial iceberg.

Call-in Telephone Lines

During Operation DESERT STORM, CHINFO operated a toll-free telephone line to answer questions from military family members. The line was a huge success and soon became the number to call even for the family members of other services. The reason for such a huge success was due, in part, to the analysis of the trends found in the calls. One such trend that the Navy exploited was the huge amount of calls from Spanish-speaking families. By chance, during the first few days of operation, a Spanish speaking person was available to answer questions. Since no other branch of service was able to handle non-English calls, the Navy was soon taking them all. Also, at the time, CHINFO saw the trend in non-English calls and institutionalized having a Spanish-speaking staffer on hand to take such calls.

This is a good example of moving with a fluid situation and of the use call-in telephone lines may be put to in identifying areas of concern. Was the military family audience in this case known? Not well enough. Was everything that was being released about the Gulf War going to all of the internal audiences we thought they were? Evidently not. A good lesson was reiterated about knowing the intended audience. It was also a good example of using data that has already been collected, and in particular, using data collected from a call-in telephone line.

FORMAL SURVEYS

For those of you who have been wondering when this chapter on surveys was going to begin looking like a chapter on surveys, your wait is over. This next section will begin dealing with more traditional forms of survey research techniques.

Telephone Surveys

The telephone is arguably the cheapest way to do a survey. Most students of journalism know about the early telephone surveys that did not take into account "who" the owners of telephones were. In 1936 the *Literary Digest* mailed out 10 million surveys to discover who was going to win the presidential race between Franklin Delano Roosevelt and Alfred Landon. This was the largest sampling of a population ever attempted up to that time. The bias of the poll was later discovered to be how the "Digest" found the addresses of their would-be respondents. They used the telephone book.

At that time in America, rural areas, as well as many inner city areas, had substantial populations without telephone access. This affected the results by surveying more well-to-do people who could afford telephones. Franklin Delano Roosevelt was planning for a large vote from the urban and rural poor. You can see how the data gathered over the telephone would have favored the candidate trying to represent the wealthier telephone owners. The poll predicted Landon by a large margin. Just the opposite occurred with Roosevelt winning in a landslide, 62 percent to 38 percent. Telephone ownership is not much of a problem for most presidential pollsters these days. However, it is still a problem when you conduct a telephone survey and many members of your audience live in the

compartment of a ship or in a barracks where one line is often the only telephone connection to scores of people.

Another important factor is that many people will not feel free to make candid comments within earshot of their shipmates.

Personal Interview Surveys

There are many advantages of face-to-face interviewing, and it is still considered the most accurate form of gathering data for a survey. However, interviewers must be properly trained so as not to let their personal habits or motives influence the sample respondent. The interviewer is supposed to be like the ultimate statesman or the ideal father or mother figure. Interviewers must be understanding, patient, modest, well dressed (but not too well dressed), soft spoken and above ail, good listeners. Do you know anybody like that? The point here is that whether doing a face-to-face interview or talking on the telephone, keeping the survey data free of any interviewer effect is important and difficult. For instance, if you are a chief petty officer doing an interview with a seaman and the question deals with the command's response to recent incidents on base vandalism, the outcome might be affected by the disparity of rank. For the most part, face-to-face interviewing will seldom be used because of the time needed to do it, the inherent difficulties of the technique and the labor cost of moving an interviewer from respondent to respondent.

Mail Surveys

The most widely used and traditional DoD survey is the mail survey. It has two very serious disadvantages though. The first and foremost disadvantage is that mail surveys most often only have a 10-to-15 percent rate of success in terms of surveys being returned. In most academic and professional polling circles, this is a useless effort. To base a decision on a mail survey with a response rate of only 15 percent is asking for a decision based on nothing better than hearsay. It is not "better than nothing" as is often heard in defense of such efforts. It is worse than nothing! The reason it is worse than nothing is because the hearsay data now has an air of fact about it that it does not deserve. It would be better not to conduct a survey at all, and base your programming or public affairs efforts on your observations of the informal survey methods mentioned above.

The second big disadvantage is that a mail survey can be filled out by anyone at the address to which it is mailed. This means if you are trying to find out what the working spouses in your audience would like the base to do about day care, you might get a large percentage of married military members simply answering for their spouses in the way they think the spouses would have, or should have answered. This will produce biased results, and again, decisions may be made that might exacerbate the problem.

Now that we have put mail surveys in their place, let us look at why we use them. One reason is because they are cheaper than personal interviews of each sample respondent. Also, the low response rate can successfully be attacked. If you can get the response rate into the 80-plus percentile range, you have a good audience representative survey on your hands.

The following is a list of proven ways to get into that response range:

1. Keep the questionnaires short. Ideally, this should mean one page with 20 or so questions. This is not a lot of questions, but remember, you are trying to get accurate information, not a bunch of responses from only those people who have the time to fill out a lengthy questionnaire. Also, keep in mind that much of your demographic information on military and DoD personnel can be gathered from existing personnel tiles. Gathering data from these files also eliminates a respondent's fear of being identified. With shorter questionnaires, the dreaded survey project will be easier to complete. This means you will probably do more of them as you become familiar with the methods. Shorter, more frequent surveying of your audience gives you a better picture of **what is happening** and that is what it is all about.

2. Put a stamped, self-addressed envelope inside the survey mailer. (One creative journalist let the survey questionnaire itself serve as the return envelope. All the respondent had to do was fold the questionnaire over, staple it shut and put it in the base guard mail system.)

3. After you make your random selections (this will be explained later), stick to them and get their response. Three or four follow-up mailings to nonrespondents are often needed to get an 80- or even a 90-percent return ratio. (See fig. 9-1.)

4. Do not continue to mail surveys to the general population until you get a magical number of responses. This will produce a survey that might have a disproportionate segment of your audience represented, and is considered to be a biased survey. An example of

	Time	Average Response Rate
1. First mailing	Week 1	23.8%
2. Post card follow-up	Week 2	42 %
3. First replacement questionnaire	Week 3	59 %
4. Second replacement sent by certified mail	Week 4	72.4%
American Sociological Review 39 (October 1974): "Increasing Mail Questionnaire Response: A Four-State Comparison"		

Figure 9-1.—Mail survey response rate progression.

this would be surveys mailed out to 400 members of your base with 59 of those surveys having been mailed, by chance, to the Marines. You do follow-up mailings to the original individuals selected that have not turned in their responses and still only the Marines remain in the category of those who have returned 100 percent of their surveys. If you have randomly selected your sample size, sending more surveys to the Marines might be appealing, but it will mean a disproportionate (biased) number of Marine opinions will then be in your survey. You should do one or more of the following: forward a follow-up notice; send second survey mailings to the chosen respondents; conduct telephone interviews; or in rare cases, conduct face-to-face interviews of those few random sample selectees who have not yet answered their questionnaires. Remember, keep your follow-up attempts based on your original randomly selected individuals.

5. Make sure the purpose of the survey is clearly stated and that each respondent has been selected by a random method and will not by any chance have his or her identity released. **Then make sure you follow through with that promise.** (Remember, credibility is paramount.)

6. Put some authority behind the cover letter to the survey. Getting the CO to sign it helps immensely.

DEVELOPMENT OF SURVEYS

Learning Objective: *Identify the concept of audience survey development.*

Now that you have an idea of what a survey can do for you and what types of surveys are available, the next step for you is to understand the components and strategies involved with producing a valid and statistically reliable survey.

GETTING STARTED

Beginning a survey project is much like beginning a story. First you should know why you are doing it. Essentially, what information are you looking for that can only be found by doing a formal survey? After you have decided that the information cannot be attained through any previously collected data source, you should begin thinking about survey production. The following is a list of questions that must be answered before you start your survey research project:

- **Who are the people you are going to survey?** "Know your audience" is a phrase that keeps coming up. Will you try to survey all the people (called the population) in your audience?
- If you are going to use a sample of the general population, **how will this sample be chosen and how large will it be?**
- **What method of distribution will you use?** The four possibilities are mail, telephone, interview or a combination of the three.
- **What type of question format will you use?** Are open-ended, close-ended or a combination of both called for?
- **How will the data be tabulated?** If at all possible, place your survey responses on a computer. This might entail asking some local computer hackers for help if none of your staff has this talent, but seeking assistance will be worth it.

Number of cases tabulated	Percentage voting against reviving the NRA
500 ballots	54.9
1,000	53.9
5,000	55.4
10,000	55.4
30,000	55.5
Total population of sample = 30,000	

Figure 9-2.—Sample size increase vs. accuracy.

- **What are the time and cost constraints?** Do you have the time, manpower and money to accomplish whatever survey project you are attempting? This is important. Set deadlines and give specific job assignments or else piles of survey junk may end up stashed in someone's desk drawer.

SAMPLE SELECTION

How large should a sample be from any given population? This question takes us into the mathematics of probability. Do not worry, you will not have to understand the statistics behind national surveys produced by the likes of George Gallup. But perhaps a quote from Mr. Gallup might help put the question of sample size in perspective. "Both experience and statistical theory point to the conclusion that no major poll in the history of this country ever went wrong because too few persons were reached."

Gallup conducted a number of experiments on the effects of sample size. In 1936, he used 30,000 ballots to ask the question: "Would you like to see the National Recovery Act (NRA) revived?" The first 500 ballots showed a "no" vote of 54.9 percent. The complete sample of 30,000 ballots returned a "no" vote of 55.5 percent. In other words, the addition of 29,500 ballots to the first 500 ballots only made a difference of 0.6 percent. (See fig. 9-2.)

Through the mathematics of probability, we know there is a real but unknown distribution of all possible answers to a question. If we then know that our sample is random (meaning that every person in our audience is just as likely to get a survey as any other person) and that our techniques are capable of obtaining a reliable response (without bias) from each person, we will be able to tell how representative the responses are.

For the purposes of this chapter, the Sociology Department at the University of West Florida supplied a quick and easy formula often used in social science research. It is shown in figure 9-3.

$$\left(\frac{Z}{h}\right)^2 \cdot PQ$$

z = 1.96 (for ease of calculations use 2. This will not noticeably alter your final product.)

h = the margin of error you are willing to accept. (2%, 3%, 4% or 5%)

P & Q = maximum expected percentages. (.50 x .50 = .25)

Figure 9-3.—Sample size formula.

With this formula, let us figure out what size sample we need to get a plus or minus error of two percent. Two divided by .02 (percents will appear in hundredths) equal 100. Square 100 and you get 10,000. You multiply this by .25 and your answer is 2,500. You need 2,500 survey responses to get a +/–2 percent margin of error. **Notice that you did not need to have information on the size of the total population in your audience.**

If you wanted to achieve a plus or minus margin of error of five percent, you would calculate as follows: Two divided by .05 equals 40. Square 40 and you get 1,600. You multiply this by .25 and your answer is 400.

For all practical purposes, a plus or minus error of five percent will be the lowest margin of error needed. For professional pollsters, a sample of 1,000 is capable, statistically, of reflecting the opinions of 250 million people. As George Gallup was quoted earlier in this chapter as saying, the size of the sample itself is not as large of a factor in determining the accuracy of a survey as conventional common sense would seem to indicate.

For the purposes of most surveys, you will develop and implement sample sizes from 100 to 400, which should be adequate. We mention 100 as the low end of sample size because our sample size determinate formula will work with total populations of 4,000 or more. For lower total populations, we suggest 10 percent of the total population until a minimum of 100 sample respondents has been reached. Additionally, below 400, categorizing by various demographics becomes less and less reliable. If you intend to break the survey results down by age or sex, you are also breaking the sample size down into smaller numbers.

For example, if the question was, "When do you watch television the most?' and the response scale covers five time blocks with 100 plus respondents, you can get a percentage that will show general population vie wing trends. If you try to break those respondents out into categories based on rank sex or marital status, your sample size for those separate categories will no longer be 100 plus. You cannot say most women watch television from 3 to 4 p.m. because only 32 of your sample respondents were women and 32 is not a reliable sample size. With a small sample such as 100, the demographic analysis of survey results is likely not to have any usable degree of certainty. You would need a larger sample size in order to make each category separated out from the general sample to at least total 100. With a survey of 400 respondents, it is likely that breaking out various categories would be possible without producing noticeable bias.

With the above statistical jargon in mind, this rule of thumb makes sense: use a sample size of 400 for populations of 4,000 or more, and 10 percent to a minimum of 100 for populations under 4,000. Remember, if you choose to use a smaller sample size than 400, be careful of breaking your total sample into smaller categories of respondents. With the appropriate sample size and careful attention to the details of survey construction and implementation, you will have a low enough chance of error to make intelligent decisions based on facts.

Random Selection

Much more important than the size of the sample, beyond a reasonable minimum, is how that sample was selected. The only way you can be sure that bias has not occurred in the selection of a respondent is by random selection. This means everybody in your total possible audience has an equal chance at being selected to complete one of your surveys.

How often have you seen a survey printed on the back of a base newspaper? This type of survey is fine if you understand that the respondents are only people who read your product to begin with. These same respondents are also the only people who care enough about whatever the question was to bother answering it. If that small slice of your audience is that important to you, then by all means run the survey on the back page of the base paper.

However, let us say you were trying to find out how many people like the garden section in your weekend paper. You printed the survey in the weekend edition and the results show that your audience loves it. You might be getting responses only from weekend readers who, in fact, do enjoy the garden section. In reality, it could just as well be that they are the only ones reading the weekend edition because the garden section turns off the rest of your potential audience. If you want to know what all of your possible readership thinks on a certain topic, then you must select respondents by some method that enables a true cross section or representation of that audience.

Selection Hint

One possible random sampling method used in the military that is easy, effective and previously mentioned in this chapter is to select survey respondents from the base alpha lists or personnel rosters. Again, work with the administration section of your command to be sure personal privacy is not violated. Choose a randomly

selected number from 0 to 9. Use the last digit of the social security numbers listed on the roster that match that number, and you will have as random a selection as you most likely will need. If the sample size is too large (with 10 possible numbers your sample size will be roughly 10 percent of your total population), then randomly select another number and match it with social security numbers that have the same digit in the second from the end position. Never use the beginning digits of the social security number because you will end up with a bias in your survey of respondents who come from the same geographic area.

WRITING THE QUESTIONS

Social scientist Paul Lazarsfeld said, "People do not answer what you say (or write), but what they think you mean." Without making the average respondent sound like the Gilligan's Island routine of answering questions literally for laughs, when you write survey questions, remember—often times no one will be around to explain just what they mean.

Question Design

There are three standards for good survey question writing. The first is precision. Does the question ask exactly what you want it to ask? If you request information on activities and say "recently," do you know what everybody's definition of "recently" is? Can there be any other way to understand the question than the way you have intended the respondent to read it?

The second standard is relevance to the respondent. Does the survey ask for opinions on something that the respondent might have no possible thoughts on? An example of this would be asking Third Class Boatswain's Mates about F-14 maneuvers. It obviously is not relevant to them.

The final standard involves personal assumptions. Do any of your questions assume the respondent will understand what is meant by a certain phrase or question? A classic example of this has been written in scores of research methods books. A British lady asks another British lady if she was alone last night. The second lady says with confidence, "yes." However, the house was full of servants. The lady who answered the question was obviously assuming the questioner wanted to know if she was with anyone that counted in social circles. Assumptions are just as dangerous in surveys as they are in news stories.

Pretesting

A good method of ridding a survey of assumption problems and other unintended bias is to gather together some willing souls and have them complete the survey. Check the answers to the questions and ask the respondents if they had any problems understanding the questions. Then listen to their answers. Do not browbeat them, or call them idiots for not understanding what you wrote. If they did not get it, how many in the sample you take will misunderstand as well?

Format

Structurally, the following are the three primary types of survey questions:

- **The yes-no question** is simple and is used for data that is censuslike. Demographics is usually an either-or question. Yes-no categories include male-female, married-single, and so forth.
- **The multiple choice question** is by far the most common type of question format used. It gives the respondent some alternatives beyond the confining yes-no choice. It is as easy to tabulate as the yes-no question and provides insight into intensities of attitudes.
- **The open-ended question** is next to impossible to tabulate and for this reason, it should be used sparingly. However, if there is a topic that is suspected of harboring deep emotions, perhaps an open-ended question is best. This type of question lets the respondent express his exact thoughts. It is also a good indicator of potential trouble spots your office might not be aware of at all. There is nothing wrong with leaving a large blank space at the end of your survey (or the back side) to record any opinions the respondents would like to share. You will not be able to tabulate the responses for statistical reliability, but they will make excellent informal data.

Measuring Intensity

Another way of measuring the intensity of a particular belief or attitude, other than the open-ended question, involves using a scale. The scale most frequently used is the Likert scale, which is named after the researcher most associated with its development. The Likert scale will reveal your audience's perception of various topics. Moreover, a Likert scale question makes a statement and categorizes the responses from

"most strongly agree to most strongly disagree" and places a scale of one through 10 in between. Figure 9-4 is an example of a Likert scale question.

Exclusion/Inclusion

When you write scaled questions and especially multiple choice questions, beware of overlapping categories. This usually entails questions asking for a numerical determination.

For example, suppose you want to determine how often the base ticket office is used by base civilians. Your survey question is multiple choice and asks the respondent to fill in a block that fits into the categories one to three times a month; three to five times a month; five to seven times a month, and so on. The respondent might have used the ticket office three times last month and now must make a choice to put his or her response in the first or second block.

When tabulating the responses, you will not be able to know accurately, in which block the person should really be. It would have been better to set up the choices as: never; one to two times a month; three to four times a month, and so on. Remember, the person who never uses the facility is also a part of your general audience and should have a place to put that information, as well as the person who might use the facility more than a set block might indicate.

RELIABILITY

The term reliability in survey research is a bit vague as compared to reliability of research in chemistry for instance. In chemistry, a quality control survey is eliable when the same results appear time after time. You have to be doing the same steps in a methodical way to obtain similar results each time. To do the same survey a number of times when dealing with human respondents is certainly possible, but the material being surveyed, human respondents, change minute by minute. So checking for reliability becomes harder to measure in a social science setting. With that qualification being said, reliability still means having a legitimate survey process that, given all other human variables being the same, would produce similar results.

VALIDITY

The term *validity* deals with whether the respondent's real opinion is discovered or not. You may have a wonderful survey process that has the questions answered the same way on the pretest and the larger complete sample survey, but the validity of the responses comes into question when you realize that the respondents had ulterior motives for answering some of the questions the way they did. For example, what if you asked your audience if they felt the government should spend less money on defense. What if the vast majority answered "NO." Do they really feel the government should not curtail defense spending, or are they afraid property values in the area will drop if word gets out that even the military people on base think less money should be spent? The doubt of how valid the response is to that question would certainly arise.

If all these potential problems in doing survey research have you muttering about how we can ever really know anything, welcome to the world of social science research. All we can do is get as close to the facts as we can through using as unbiased a process as possible. Margins of error till always be with us when

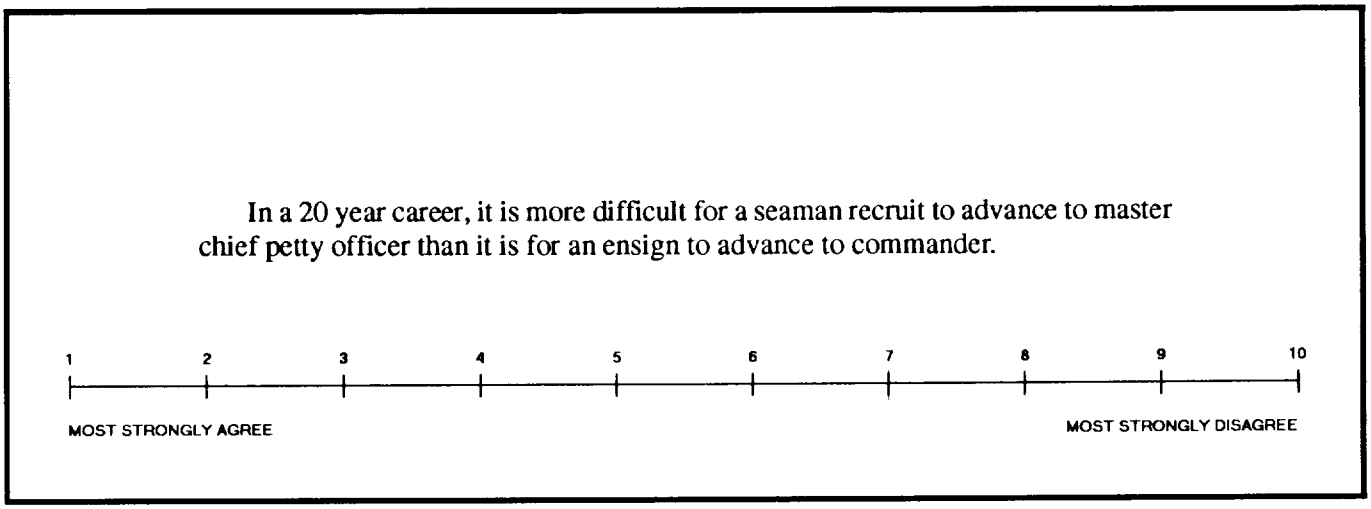

Figure 9-4.—Likert scale.

we try to measure the most fluid paradigm in the world–human thought.

ANALYSIS OF SURVEYS

Learning Objective: *Analyze and use the data generated by audience surveys.*

The simplest and easiest way to communicate a complicated list of data to an audience is with a picture. As journalists and as a result of your studying Chapter 6 of this training manual, you already know about the various types of visual communication possible for displaying data. The final section in this chapter covers understanding the survey data you have collected and how to correctly plug that data into visual representations, such as graphs and charts.

CORRELATIONS

As mentioned earlier in this chapter, making decisions, based on samples of under 400 from general populations of 4,000 or less, is possible and reliable if you are making simple comparisons. A simple comparison is what percentage of your sample watches television. Your results might look like the following: 34 percent–0600-0800, 10 percent–0801-1000, and so on. But if you wanted to know what percentage of those who watch from 0600-0800 are women or children, then remember, you must have a large enough sample to keep each category you want your survey broken into over 100. This will keep the relationship between viewers watching from 0600-0800 and the sex of those viewers reliable.

Correlating viewership with demographics is important, for example, when you plan to run information spots targeting women. Questions, such as, when do most spouses watch your television station, listen to your radio station or what editions of your paper are they more likely to read, are important to answer when you plan an information campaign. **Know Your Audience.** As Rear Adm. Baker, the former CHINFO once said: "Work smarter, not harder."

GRAPHIC DISPLAY

The last section of this chapter ties back with the scenario used in the introduction. Putting your data into a picture to give it impact is absolutely necessary and also dangerous. It is necessary because few people will take the time to study raw print-out sheets of data, no matter what the claims of the surveyor are. It is also dangerous because a mistake in how you present your survey findings can ruin the credibility of all your efforts.

How many times have you heard the saying, "Statistics lie"? You must display your survey findings in the most understandable way possible and still stay within the boundaries of fair representation. Perhaps the best way to understand how to present your data fairly is to see some examples of how to be unfair. These examples will also increase your ability to spot abuse of statistical data.

Let us say that as the command's expert on survey techniques, you volunteered to supervise Morale, Welfare, and Recreation's facility usage survey. You have followed the guidelines in this chapter and have collected reliable and valid data and are ready to present the results to the CO.

The CO's pet project is the base racquetball courts, and he is interested to see how many sailors are using it since it was built last year. You are aware of his interest and decide to graph the informal aggregate data collected by reviewing the sign-up sheets in the racquetball court front office. You hope to show a steady increase in usage since your broadcasting outlet has been regularly producing information and selling spots on the new courts. Starting with January, you list each month on the bottom of your line graph. On the left, you place numbers of users in blocks of 20 and begin to place your data on the graph. An example of this is shown in figure 9-5.

The line chart does indeed show a steady progression of increased usage up the graph. However, because of the scale you used, the data does not really jump out at you. So you decide to display your information in a more effective manner. To be more pleasing to the eye, you cut off the upper and lower sections of the graph to end up with the display shown in figure 9-6.

The graph looks better to you now and it even shows the slight dip in the summer months when you were forced to go TAD causing, in your estimation, radio spot production to fall off. If only the data could illuminate that fact a bit more you might even get a letter of appreciation from the CO for doing such a good job of promoting his pet project. To highlight the summer dip, you decide to go with the graph in figure 9-7.

That does it. Who could deny that the base racquetball court, the CO's pet enterprise and your personal advertising project, is not a big success? Was the data changed in the various graphs? Was there a lie in any of the charts? The answer is yes and no. There is

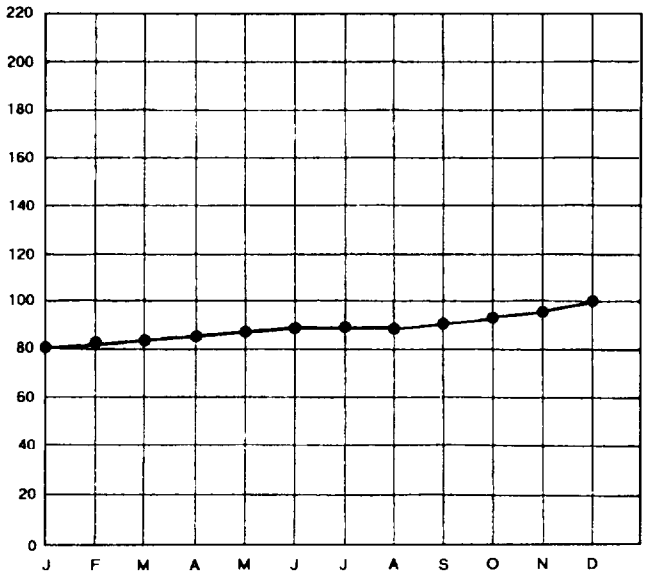

Figure 9-5.—Obscuring results.

no need to hide the data from anyone by making the scale too hard to see such as in the first graph produced. There also should not be any of the surveyor's personal interests involved in choosing the method of display. The data should be presented with only the communication of the facts as the goal.

Given that the CO was astute and, being an engineer, well aware of statistics and their uses, how creditable would the JO sound when bragging about the advertising campaign for the racquetball courts and how the TAD upset that campaign? What if the CO was a racquetball player and knew how hot the courts were in the summer? Would the credibility of the JO then come into question? Of course it would!

The lesson on graphics is simple. Use whatever visual communication device you need to get your message to its intended audience. Nevertheless, beware of making the data look suspect by taking too many creative liberties. Remember, many in your audience will be as good of a statistics consumer as you now are

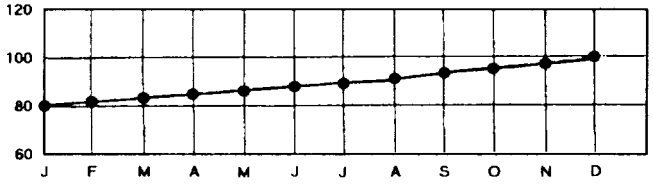

Figure 9-6.—Suitable display.

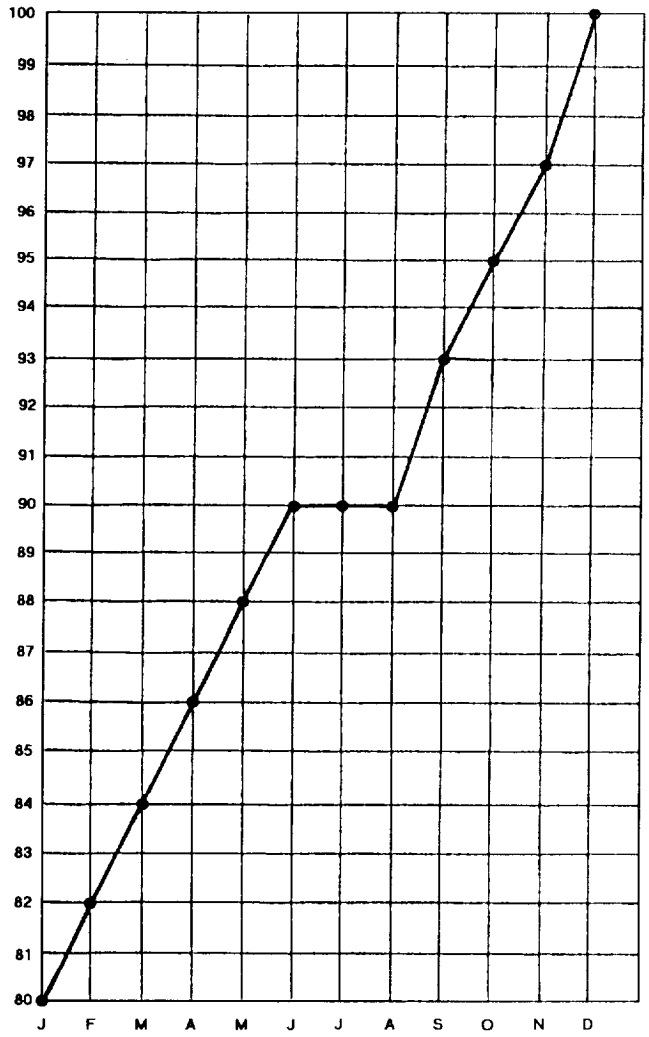

Figure 9-7.—Exaggerated results.

and once the data becomes suspect because of an obvious attempt to manipulate the figures, your credibility is gone and your efforts have been wasted.

SUMMARY

This chapter is part of the JO 1 & C training manual because of the growing demand from the public affairs community and the ongoing need of internal media relations to **know what is happening** and to **know their audience.** Survey production and analysis have only recently been included in the occupational standards for journalists, but it has long been a part of the rating. AFRTS and, since 1975, NBS, have always required an annual audience survey. More and more public relations practitioners in the civilian world are having to prove their worth on the bottom line to their chief executive officers (CEOs). Proving the money value, more often than not, entails sophisticated statistical analysis of program effect.

In the same light, no CO is going to give much support to a journalist or a PAO whose only measure of achievement is the number of press releases sent out or the number of tours given. For military journalists and PAOs, the mandate is clear. We must be the eyes and ears of the Navy in the media paradigm. We must be the professional producers and consumers of statistical information in order to maintain our position in the Navy as media experts. It is our future.